

REMARKS:

The claims in the application are 37-54 and Claim 55 added by the present amendment.

Favorable reconsideration of the application as amended is respectfully requested.

The present amendment is being made in accordance with a telephone interview conducted between the Examiner in charge of the above-identified application and the undersigned attorney on Monday, August 23, 2004. The courtesy extended by the Examiner in arranging for and conducting the telephone interview is greatly appreciated.

Claims 37, 38, 40-43, 45-48, 50 and 52-54 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 6,088,161 to Lee in paragraph 2 of the Final Office Action, while Claims 39, 44 and 49 have been rejected under 35 U.S.C. §103 as obvious additionally in view of U.S. Pat. No. 6,337,752 to Heckenkamp et al in paragraph 4 of the Final Office Action and Claim 51 rejected as obvious additionally in view of U.S. Pat. No. 5,080,758 to Solmsdorf in paragraph 5 of the Final Office Action.

Independent Claim 37 has been amended as presented for discussion during the telephone interview, with the following revision. Claim 37 as amended herein recites at least one of the regions 21, 22 of the hologram 1 reconstructing the different images from different gaze directions further comprises at least one sub-region which

does not take part in the image reconstruction (reference is being made to preferred embodiments of the present invention illustrated in the drawings of the present application). Recitation of each of the regions 21, 22 comprising at least one sub-region not participating in the image reconstruction, has been introduced as dependent Claim 55.

In any event, it is respectfully submitted the invention as recited in all pending claims herein is patentable over the applied art, for the following reasons.

The present invention is directed to an improved security feature which makes forgery more difficult and, at the same time, is easy to manufacture. These often mutually-exclusive advantages are explicitly attained by the invention recited in independent Claim 37 which is directed to a dual-channel hologram 1 having different regions 21, 22 associated with different channels and reconstructing different images from different directions of gaze 27, 29. At least one of the regions 21,22 of the hologram 1 reconstructing the respective image under incident light 7 further comprises at least one sub-region which

- (i) does not take part in the image reconstruction,
- (ii) can also only be seen from the respective direction of gaze 27, 29, and
- (iii) has been modified by laser or printing against participating in the image reconstruction.

As described, e.g., in the paragraph bridging pages 3-4 of the present application, these claimed features provide different views from the different directions of gaze 27, 29 at the hologram 1, generating a "tilt effect," and making forgery significantly more difficult because the holographic structure is very difficult to imitate by photocopying. At the same time, additional optical structures are not required to permit observation of the hologram 1 from the different directions 27, 29. The sub-region(s) can be arranged to supply recognizable indicia such as identification numbers, when viewed in the respective direction.

In paragraph 6 of the Final Office Action, it is asserted independent Claim 37 is a product-by-process claim; although Claim 37 might recite some "processing features," nevertheless Claim 37 also recites optical features and properties, so Claim 37 cannot be simply dismissed as a product-by-process claim. It is respectfully emphasized laser-modified optical properties do not constitute mere processing limitations. Usage of a laser or printing generates characteristic structural features that are present in the final product or security feature.

Furthermore, as pointed out during the telephone interview, Lee '161 fails to teach or suggest the claimed invention and accompanying advantages, for the following reasons. In paragraph 6 of the Final Office Action, the Examiner has cited the following excerpt at column 9, lines 20-25 from Lee '161:

In one embodiment of the invention, one or more of the images generated by the diffractive device may consist of a uniform or blank image plane which can be encoded with image information by the destruction or modification of diffracting elements at selected locations along selected diffraction tracks. . .

However, in the very next sentence, it is stated in Lee '161 that this technique enables generating new diffractive images after production of the diffractive elements (column 9, lines 25-29). Thus, the meaning of this excerpt from Lee '161 can only be understood as directed to modifying existing diffractive elements and not generating new features which do not take part in holographic reconstruction.

Furthermore, Lee '161 fail to disclose such modifications are viewable only from distinct directions of gaze. During the telephone interview, the Examiner had called attention to column 7, lines 50-58 of Lee '161 which states the following:

On or more of the diffracting tracks may contain diffusely reflecting regions (consisting of randomly spaced grooves) and/or specularly reflecting regions in between diffracting regions. Diffusely reflecting regions may be used to encode auxiliary information not found in the diffraction image. Specularly reflecting regions may be used to enhance the contrast properties of the diffracted image. . .

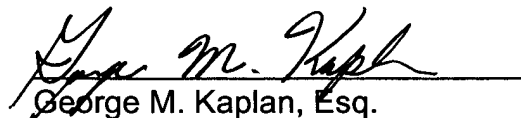
However, as pointed out by the undersigned during the telephone interview, Lee '161 fails to disclose these regions as having optical properties which can only be seen from the respective directions of gaze, thereby enhancing security features.

Accordingly, independent Claim 37 recites features (i)-(iii) supra and which are not shown or suggested by Lee '161. Therefore, independent Claim 37 and the dependent claims therefrom are neither anticipated by nor rendered obvious over Lee '161. Heckenkamp et al and Solmsdorf add nothing to Lee '161 which renders obvious the invention as recited in any pending claim herein. The remaining art of record has not been applied against the claims and will not be commented upon further at this time.

Accordingly, in view of the forgoing amendment, accompanying remarks and telephone interview, it is respectfully submitted all claims pending herein are in condition for allowance. Please contact the undersigned attorney should there be any questions.

Early favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "George M. Kaplan", is written over a horizontal line.

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